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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/554,400	10/24/2005	Yuki Yokoyama	050417	4602

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EXAMINER	
MUSTAFA, IMRAN K	

ART UNIT	PAPER NUMBER
3663	

MAIL DATE	DELIVERY MODE
05/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/554,400	YOKOYAMA ET AL.	
	Examiner	Art Unit	
	IMRAN MUSTAFA	4182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 October 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/24/2005,2/9/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1-11, 13, 14 rejected under 35 U.S.C. 102(b) as being anticipated by Savard (US 6,736,216)

As to claim 1 Savard discloses a device for giving indications to the operator of a work machine, characterized in comprising:

a measurement device for measuring the position of a construction surface, which is a current work object, and the position of other objects located in the vicinity of said construction surface, while said work machine is performing work(Column 4 lines 43-Column 5 lines 4)

a reference point detection unit for detecting reference points corresponding to reference markers disposed in the vicinity of said construction surface, from the

positions of the construction surface and other objects measured by said measurement device (Column 4 lines 22- lines 30).

A virtual line calculation unit for calculating a virtual line corresponding to a target surface that is to be formed, on the basis of said reference points detected by said reference point detection unit(Column 4 lines 22- lines 30);

A display data creation unit for creating display data for displaying images indicating the positions of at least said construction surface and said virtual line, on the basis of said positions measured by said measurement device and said virtual line calculated by said virtual line calculation unit(Column 5 lines 47- lines 65); and

A display device for receiving said display data from said display data creation unit and displaying said images on a display screen(Column 5 lines 47- lines 65);.

As to claim 2 Savard discloses a device that characterized in that said display creation unit creates said display data in such a manner that an image which also depicts the position of said other objects in addition to the positions of said construction surface and said virtual line is displayed(Column 5 lines 47- lines 65);.

As to claim 3 Savard discloses a device characterized in that said measurement device is disposed in such a manner to move or turn direction in unison with said work machine, when said work machine moves or turns direction, whereby, even if said construction surface moves due to said work machine moving or turning direction, the positions of said construction surface and the other objects located in the vicinity of said construction surface are measured(Column 1 lines 47-64) and an image indicating the

positions of said construction surface and said virtual line is displayed (Column 5 lines 47-65).

As to claim 4 Savard discloses a device that said measurement device determines the positions of said construction surface and other objects on a continuous basis(Column 4 lines 43-Column 5 lines 4), whereby an image indicating the substantially real time positions of said construction surface and said virtual line is displayed on the screen(Column 5 lines 47-65)..

As to claim 5 Savard discloses a device characterized in that said reference point detection unit detects a position satisfying prescribed geometrical conditions, from the positions of said construction surface and other objects measured by said measurement device, as said reference point(Column 4 lines 22-lines 42)..

As to claim 6 Savard discloses a device that said reference point detection unit detects a position specified by said operator, from the positions of said construction surface and other objects measured by the said measurement device, as said reference point(Column 4 lines 22-lines 42).

As to claim 7 Savard discloses a device according to claim 1, that said reference point detection unit detects a plurality of positions from the positions of said construction surface and the other objects measured by said measurement device, as said reference points(Column 4 lines 22-lines 42); and

Said virtual line calculation device calculates said virtual line in such a manner that said virtual line passes through said plurality of reference points thus detected. (Column 4 lines 22-lines 42)

As to claim 8 Savard discloses a device characterized in further comprising: an acting component detection unit for detecting the position of an acting component which acts on said construction surface of said work machine(Column 4 lines 43-Column 5 lines 4);

Wherein said display creation nit creates said display data creation unit creates said display data in such a manner that an image which depicts the position of said acting component in addition to the positions of said construction surface and said virtual line, on the basis of the position of said acting component detected by said acting component detection unit (Column 5 lines 47-65).

As to claim 9 Savard discloses a construction target indicator device in that said acting component detection unit detects the position of said acting component from the positions of said construction surface and said other objects measured by said measurement device(Column 4 lines 43-Column 5 lines 4);.

As to claim 10 Savard discloses a device characterized in further comprising an acting component position correction unit for correcting the position of said acting component detected by said acting component detection unit, by means of a prescribed offset amount(Column 4 lines 43-Column 5 lines 4);

Wherein said display data creation unit creates said display data in such a manner that an image which depicts the corrected position of said acting component in addition to the positions of said construction surface and said virtual line, on the basis of the position of said acting component corrected by said acting component position correction unit, is displayed (Column 5 lines 47-65).

As to claim 11 Savard discloses a device characterized in that displacement sensors for measuring the displacement of a plurality of components of said work machine are provided in said work machine(Column 4 lines 43-Column 5 lines 4);;; and

said acting component detection unit detects the position of said acting component on the basis of the displacement of said plurality of components measured by said displacement sensors(Column 4 lines 43-Column 5 lines 4);

As to claim 13 the claim is interpreted and rejected as in claim1.

As to claim 14 Savard discloses a method for giving indications to the operator of a work machine, characterized in comprising the steps of:

Measuring the position of a construction surface, which is a current work object, and the position of other objects located in the vicinity of said construction surface while said work machine is performing work(Column 4 lines 43-Column 5 lines 4).

Detecting reference points corresponding to reference markers disposed in the vicinity of said construction surface, from the measured positions of the construction surface and the other objects (Column 4 lines 22- lines 30).

Calculating a virtual line corresponding to a target surface that is to be formed, on the basis of said detected reference points(Column 4 lines 22- lines 30).; and

Creating an image indicating the positions of at least said construction surface and said virtual line, on the basis of said measured position and said calculated virtual line, and displaying said image on the display screen(Column 5 lines 47- lines 65);.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Savard (US 6,736,216) in view of Yokota (US 2002/0183924).

As to claim 12 Savard discloses a device characterized in that said display data creation unit creates display data for displaying an image which shows a view of the positional error between said construction surface and said virtual line(Column 5 lines 47- lines 65),

Said display device displays said image by receiving said display data from said display data creation unit (Column 5 lines 47- lines 65).

Savard does not disclose of displaying an emphasized image on the display. Yokota, however, displays an emphasized image of the display data (Paragraph 40) in response to a request from the operator. It would have been obvious to one skilled in the art to have the ability to have an enlarged display with the motivation of allowing the user to see the data more easily.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IMRAN MUSTAFA whose telephone number is

(571)270-1471. The examiner can normally be reached on Mon-Fri 7:30AM-5:00PM, Alt Fri, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

5/8/2008
/Imran Mustafa/
Examiner, Art Unit 3663

Imran Mustafa

/Jack W. Keith/
Supervisory Patent Examiner, Art Unit 3663